

## REQUEST FOR PROPOSAL

City of Dublin, Ohio  
Division of Engineering

### AVERY-MUIRFIELD DRIVE ROUNDABOUT DESIGN AT PERIMETER LOOP ROAD/HOSPITAL DRIVE AND PERIMETER DRIVE

#### 1.0 PROJECT DESCRIPTION

This project involves intersection improvements consisting of two-lane roundabouts with brick paver truck aprons at the intersections of Avery-Muirfield Drive with Perimeter Drive and Perimeter Loop Road/Hospital Drive. Included in the project scope will be additional traffic analysis to determine the order of construction of the two intersections prior to the start of detailed design. The plans will be developed as a two phase construction project. Detailed construction drawings including enclosed storm sewers, street lighting, complex Maintenance of Traffic (MOT), traffic control and post-construction Best Management Practices (BMP) will be completed for each construction phase. Right-of-way plans, legal descriptions and exhibits will also be prepared.

- 1.1 Completion Date: Construction is scheduled for the first intersection in 2017. Acquisition and utility relocation are scheduled in 2016. Signed plans must be delivered June 10, 2016.
- 1.2 Prior Plans & Studies: Consultant can refer to the Avery-Muirfield Drive North Corridor Study (Study #240) performed by Burgess & Niple (B&N) in 2004 and the Avery-Muirfield Drive North Corridor Study (Study #434) performed by Burgess & Niple in 2012.
- 1.3 Project Funding: This project is entirely locally funded. No state or federal dollars are being used.
- 1.4 Status Updates: Consultant will provide written project updates on a weekly basis via e-mail.
- 1.5 Maintenance Responsibility: City of Dublin
- 1.6 Type of Consultant Agreement: Lump Sum
- 1.7 Project Bidding: The City of Dublin will prepare all additional bidding documents and bid the project. Consultant will assist the City with answering questions during the bidding and construction period and attend the pre-construction meeting.

#### 2.0 TRAFFIC ANALYSIS

##### 2.1 AREA LIMITS

- 2.1.1 The study area for the update will consist of Avery-Muirfield Drive from (and including) its intersection with the westbound US 33 Ramps to the Post Road intersection.

## **2.2 Review Previous Studies and Reports**

**2.2.1** The consultant will review to understand the previous study work performed in the corridor that includes the 2004 and 2012 studies, the related traffic impact study for the Kroger Gas site, and the I-270/US 33 interchange study. A brief summary will be prepared that compares and correlates the previous analysis, assumptions, and findings, with an assessment of the validity of previous assumptions. Consultant will facilitate one (1) meeting meet with City Staff to discuss the findings/make recommendations of the review. This work includes the following below:

### **2.2.2 Review Previous Traffic Forecasts**

**2.2.2.1** The consultant will review the traffic volumes used in the previous analysis and/or make any adjustments as needed. The consultant will facilitate one (1) meeting with City Staff to review the forecasts and make recommendations for adjustments.

### **2.2.3 Review Previous Traffic Operational Analysis**

**2.2.3.1** The consultant will review the previous analysis used for the proposed roundabouts. The consultant will make recommendations and be prepared to implement them to ensure the best and most appropriate methodologies are being used.

## **2.3 Traffic Operational Analysis**

**2.3.1** The City's preference is to construct this project as a Phase 1 – Phase 2 project, with Phase 1 constructing one intersection and associated improvements in 2017 and Phase 2 constructing the other intersection and remaining work in 2018. The consultant will perform analyses to determine the order in which the intersections should be built from a traffic operations and maintenance of traffic perspective. This work will include the use of VISSUM and/or Synchro models to determine the operational impact of the two types of intersection traffic control (roundabout and traffic signal) working together in close proximity in this corridor. Maintenance of traffic and other constructability issues should also be considered. The analysis will extend from the US 33/SR 161 intersection northward to the Post Road intersection along the Avery-Muirfield Drive corridor. A memo report will be submitted to the City to document this work.

## **2.4 Update Cost Estimates**

- 2.4.1** The consultant will update the cost estimates for each intersection, and will also prepare individual cost estimates for relocating the “Y” drive near Wendy’s and Tim Horton’s.

## **2.5 Technical Memorandum**

- 2.5.1** The study effort, all data, analysis, and findings will be documented in a technical memorandum that includes technical appendices with all data, calculations, and analysis software outputs. B&N will facilitate one (1) meeting to discuss the final technical memorandum and any revisions. This report will be provided in both hard copy and an electronic PDF format.

## **2.6 Other Meetings**

- 2.6.1** The consultant will attend up to two (2) additional meetings with City Staff to discuss progress, methods, assumptions, or other items upon request by the City or the consultant.

## **3.0 PROJECT DESIGN CRITERIA**

- 3.1** City of Dublin standards, Columbus Construction and Material Specifications (CMS) and the Ohio Department of Transportation (ODOT) CMS, current edition will be used.
- 3.2** Functional Classification: Major Arterial – Avery-Muirfield Drive; Minor Arterial – Perimeter Drive; Collector – Perimeter Loop Road/Hospital Drive
- 3.3** Design Year: 2035
- 3.4** Design Speed: 40 mph for all subject roadways
- 3.5** Design Vehicle: WB-50
- 3.6** Horizontal Alignment: Preliminary alignment for both intersections will be performed to minimize the impact to adjacent properties and developments.
- 3.7** Vertical Alignment: Preliminary profile for both intersections will be performed and is expected to be close to existing conditions to minimize the impact to adjacent properties and developments.
- 3.8** Pedestrian Facilities: An 8-foot wide asphalt shared-use path will be constructed along all four legs of each roundabout and will connect to existing facilities.
- 3.9** ADA Requirements: All intersections, driveways and paths shall be designed to meet ADA requirements throughout the project.
- 3.10** Typical Section Criteria:
  - 3.10.1** Lane width = 12-feet; Cross slope = 1.60%
  - 3.10.2** Curb-and-gutter: Dublin standard per Dublin SCD RD-02
  - 3.10.3** Straight curb: Columbus straight 18-inch curb per SCD 2000

- 3.10.4** Tree lawn: Width = 8-feet; Cross slope = 1.60%
- 3.10.5** Shared-use Path: Width = 8-feet; Cross slope = 1.60%
- 3.10.6** Back Slope: Desired = 4:1; Maximum = 3:1
- 3.10.7** Pavement Type: Full-depth asphaltic concrete
  - 3.10.7.1** Item 448 – 1 ¼-inch asphaltic concrete surface course, Type 1, Medium Traffic, PG64-22 (ODOT)
  - 3.10.7.2** Item 448 – 1 ¾-inch asphaltic concrete intermediate course, Type 2, Medium Traffic, PG64-22 (ODOT)
  - 3.10.7.3** Item 301 – 9-inch Bituminous Concrete Base
  - 3.10.7.4** Item 304 – 6-inch Aggregate Base
- 3.11** Drainage Design: Closed drainage system per City of Dublin requirements with profile shown on separate sheets.
  - 3.11.1** Design Year Storm: 5-year flowing full
  - 3.11.2** Hydraulic Grade Line Check: 10-year event
  - 3.11.3** Curb-and-gutter inlets: Columbus AA-S125 unless approved otherwise by the City.
  - 3.11.4** Allowable pavement spread: 7.5-feet
  - 3.11.5** Post Construction BMP: The Consultant will evaluate the need for a post construction BMP. If required, a BMP shall be designed in accordance with the ODOT L&D, Volume 2.
  - 3.11.6** Improvements will be shown on the roadway plan sheets with separate sheets for the storm profiles.
  - 3.11.7** All proposed storm sewer pipe shall meet Columbus CMS 706.02
  - 3.11.8** Storm sewer tributary area map shall be included.
- 3.12** Driveways: Replace in kind using City of Dublin standards. Drive profiles and details shall be provided. Include design of relocating the “Y” drive near Wendy’s and Tim Horton’s.
- 3.13** Maximum profile slope: Apron = 4.0%, Crosswalk = 1.60%
- 3.14** Roadway Lighting: The Consultant will perform the lighting layout and provide it to the City in CAD and Visual format. The Consultant shall be responsible for generating the circuit diagram, voltage drop calculations and quantity calculations.
- 3.15** Grading Plan: Shall be shown using one-foot interval contour lines on separate sheets for the entire project.

- 3.16** Traffic Control: Signing or pavement marking (Item 644 - Thermoplastic Pavement Markings) plans shall be in accordance with Ohio Manual of Uniform Traffic Control Devices and the ODOT C&MS, 2010 edition.
- 3.17** Maintenance of Traffic: Generate conceptual MOT and subsequent final detailed MOT notes and phases with input from City staff. Two-way traffic will be maintained on Avery-Muirfield Drive at all times.
- 3.18** Proposed Right-of-Way & Easements: The right-of-way documents shall follow ODOT requirements for 8½" legal exhibits and descriptions, property map and centerline plat.
- 3.19** Utility Relocations: Coordination will be by the City of Dublin with assistance from the Consultant as necessary.
  - 3.19.1** Public Utilities: In general, design roadway to minimize utility relocations when possible. The City will provide necessary plans for all public utilities in the project area.
  - 3.19.2** Private Utilities: In general, design roadway to minimize utility relocations when possible. The Consultant will contact all existing utility providers in the area and map accurately horizontal and vertical alignments. In conjunction with each plan submission, consultant will provide plans to all existing utility providers and ask for comments and feedback on the plans.
  - 3.19.3** Non-destructive testing may be required at ten (10) locations to locate existing utilities at critical utility crossing locations with proposed underground work. The Consultant will submit final plans to each utility provider for their record and coordination of potential relocation.
- 3.20** Geotechnical: The city will provide The Consultant with any existing boring logs in this area. No geotechnical will be necessary for this project.
- 3.21** Restoration: All medians, tree lawns, and any affected yard areas located on the backside of the shared-use paths will be restored with 3-inches of topsoil free of aggregate, and to include seed, fertilizer, and watering per City of Dublin design criteria.
- 3.22** Permits: The City of Dublin will apply and pay for all necessary permits. The Consultant shall prepare any necessary permits.
  - 3.22.1** NOI permit: If less than 1 acre is disturbed no permit is necessary.
- 3.23** Plan Format:
  - 3.23.1** ODOT format unless directed otherwise by the City.
  - 3.23.2** 34"x22", 4 mil polyester film mylar, plotted
  - 3.23.3** Scales: English units
    - 3.23.3.1** Plan and Profile: 1"=20' horizontal, 1"=5' vertical

**3.23.3.2** Cross Section: 1"=5' horizontal and vertical

**3.23.3.3** Details: As necessary

**3.23.4** Text Format: 0.1" minimum text height and NO slanted text

**3.24** Meetings:

**3.24.1** Project kickoff meeting

**3.24.2** Interactive plan review with the City is anticipated with a maximum of 4 meetings with the City to obtain the 30% plan set.

**3.24.3** Two meetings are anticipated after both the 60% and 90% submissions, for a total of 4 meetings, to discuss review comments.

**3.25** Plan Submissions & Review. Plan submissions will be made to Dublin at the following stages: 30% complete, 60% complete, 90% complete, and final roadway plans. The City will review plans and provide comments within 2 weeks of submission date. If any water lines or hydrants are impacted the consultant will submit plans to Columbus for review. City of Dublin will pay any City of Columbus review fees.

#### **4.0 SURVEY**

**4.1** The existing roadway alignments and rights-of-way have not been surveyed. The Consultant shall use the Franklin County Auditor's mapping, existing record plans which will be provided by the City of Dublin, and aerial photography to prepare initial base plans.

**4.2** The Consultant will prepare and send a letter which has been reviewed and approved by the City to all affected property owners informing them of survey work before the start of field work.

**4.3** Field survey information will be necessary for design and plan preparation. Survey information will supplement Franklin County Auditor's mapping and will include:

**4.3.1** Control: Establish centerline of Right-of-Way.

**4.3.2** Benchmarks: Establish temporary benchmarks (TMB) for vertical control based on existing control monumentation in the area. The vertical control datum will be NAVD 1988. Placement shall be such that the TBM's will not be disturbed during construction.

**4.3.3** Alignments: Establish a survey baseline for horizontal control. Horizontal datum will be Ohio State Plane Coordinate System, South Zone, NAD 83 (1986).

**4.3.4** Profiles: Profile mainline and side roads at maximum 50' intervals and driveways as necessary to accurately define existing conditions.

**4.3.5** Cross Sections: 50' intervals with additional sections at driveways or other areas of varying topography which require additional

detail. Minimum width of 75' from centerline and 100' from centerline in the areas of the proposed roundabouts, or as needed based on design.

- 4.3.6** Obtain property corner information and building corners by field survey and property research to establish property boundaries for plan preparation. Rights-of-way that are needed for this project will then need to be obtained.
- 4.3.7** Prior to and during the field survey work and data collection, gather existing utility information from: The Ohio Utilities Protection Service (OUPS), private utilities, public utilities and City of Dublin, including but not limited to the locations of existing water mains, water taps, sanitary sewers, sanitary sewer taps, and storm sewers.
- 4.3.8** In addition to the above, obtain topographic information to supplement mapping: including the collected utility information; roadway centerline; and detailed topographic information.
- 4.3.9** A tree survey in accordance with City Ordinance No. 95-96 shall be completed. Plan sheets shall clearly show where tree removal is unavoidable.
- 4.3.10** Right-of-Way Staking: Locate lath on existing and proposed right-of-way and/or easements for the City and property owners.

## **5.0 30% SUBMISSION (Line, Grade & Typical)**

- 5.1** The following items are to be included in the 30% plan set for two sets of construction drawings, one set for each project phase:
  - 5.1.1** Title Sheet
  - 5.1.2** Typical Sections
  - 5.1.3** Plan & Profile: All horizontal geometry showing the toe/top of slope to assist in determining the impacts to adjacent properties and the need for additional right-of-way or easements.
  - 5.1.4** Cross Sections
  - 5.1.5** Preliminary Grading Plan
  - 5.1.6** Preliminary Cost Estimate
  - 5.1.7** Preliminary right-of-way impact drawing with acreages calculated for each impacted parcel.
  - 5.1.8** The Consultant will prepare and submit two (2) full-size sets & one (1) half-size set of 30% plans for City review.

## **6.0 60% SUBMISSION**

- 6.1** The following items are to be included in the 60% plan set for two sets of construction drawings, one set for each project phase:
  - 6.1.1** Refined 30% plan set
  - 6.1.2** Cross Sections
  - 6.1.3** Preliminary Maintenance of Traffic (MOT) plan
  - 6.1.4** Preliminary storm sewer layout, profiles & drainage calculations
  - 6.1.5** Lighting plan
  - 6.1.6** Grading plan
  - 6.1.7** Right-of-Way plans
  - 6.1.8** Updated cost estimate
  - 6.1.9** The Consultant will prepare and submit two (2) full-size sets & one (1) half-size set of 60% plans for City review.
  - 6.1.10** Electronic files in PDF format
  - 6.1.11** Drainage calculations

## **7.0 RIGHT-OF-WAY SUBMISSION**

- 7.1** The following items are to be included in the right-of-way submission:
  - 7.1.1** Right-of-way plans for each project phase
  - 7.1.2** Legal descriptions and exhibits for each project phase

## **8.0 90% SUBMISSION**

- 8.1** The following items are to be included in the 90% plan set for each project phases:
  - 8.1.1** Refined 60% plan set
  - 8.1.2** Signing and pavement marking plan
  - 8.1.3** General summary with quantities
  - 8.1.4** Final drainage calculations
  - 8.1.5** Revised construction cost estimate
  - 8.1.6** Electronic files in PDF format
  - 8.1.7** The Consultant will prepare and submit two (2) full-size sets & one (1) half-size set of 90% plans for City review.

## **9.0 FINAL SUBMISSION**

- 9.1** The following items are to be included in the final submission for the total plan set:
- 9.1.1** Provide one set of Mylar tracings (four-mil, double mat)
  - 9.1.2** One set of all electronic files on compact disc in AutoCAD Release 2008 to 2014 DWG format including all supporting files (SHP, SHX, CTB, STB, etc.)
  - 9.1.3** Electronic files in PDF format
  - 9.1.4** One half-size set of paper originals to the City for reproduction purposes and eight (8) additional half-size sets, three hole punched
  - 9.1.5** Full size sets, as requested to meet the City's and contractor's needs
  - 9.1.6** Final construction cost estimate including all quantity calculations in a format which can be checked for accuracy should questions arise during construction.

## **10.0 SPECIFICATIONS FOR DETAILED FINAL DESIGN** - Construction plans and specifications will be prepared to be a complete and biddable set of construction plans. The following design manuals shall be followed as applicable:

- 10.1** City of Dublin Standard Drawings; Standards for Title Sheet, General Notes, Driveway Standards, AutoCAD example, and Electronic Submission Standards will be provided to the Consultant
- 10.2** City of Columbus 2012 Construction and Material Specifications including supplemental specifications
- 10.3** ODOT's 2013 Construction and Material Specifications
- 10.4** ODOT's "Location and Design Manual"
- 10.5** ODOT's November 2011 "Minimum Specifications for Aerial Photography and Mapping
- 10.6** ODOT's "Specifications for Subsurface Investigations"
- 10.7** "Transfer and Conveyance Standards" of the Franklin County Auditor and the Franklin County Engineer as adopted under ORC 319.203.
- 10.8** 2010 ADA Standards for Accessible Design

## **11.0 TIME OF COMPLETION**

**11.1** The Consultant accepts the City's commitment to advertise the project for bids and subsequently award the roadway construction contract in 2017, with construction expected to commence thereafter. Acquisition and utility relocation must occur in 2016. Therefore, The Consultant commits to work with the City to perform their professional engineering services expeditiously and in accordance with the following time frames:

- 11.1.1** Field Survey and Data Collection as outlined in Section 3.3 of Survey work shall be completed no later than thirty (30) calendar days after the Consultant is given the Notice to Proceed.
- 11.1.2** The 30 % submission must be complete in September 2015.
- 11.1.3** The 60% completion must be complete in December 2015.
- 11.1.4** The legal descriptions and exhibits along with right-of-way plans must be complete in January 2016.
- 11.1.5** The final plans, details, and technical specifications as outlined in Section 3 shall be completed no later than June 10, 2016. Completion of the Final Design shall be defined as delivery to the City of Dublin, Division of Engineering of all final detailed plans and technical specifications, estimate of quantities, and estimate of construction costs.

**12.0 PROPOSAL CONTENT & EVALUATION CRITERIA** - Evaluation of the proposals, and selection of the firm to provide professional engineering services, will be based on the following criteria:

### **12.1 Firm and Individual Qualifications**

**12.1.1** Consultant shall submit information sufficient to inform the City of Dublin of the firm's and individual project team member's qualifications sufficient to complete the project to industry standard of care.

### **12.2 Capacity to Perform the Work**

**12.2.1** Consultant shall submit a statement of understanding for the work to be performed, as well as Consultant's technical approach to the Scope of Services.

**12.2.2** Consultant shall submit a statement of understanding for successfully completing this project within the established timeframe.

### **12.3 Time of Completion**

**12.3.1** Consultant shall demonstrate their commitment to perform the work expeditiously and without delay.

**12.3.2** Consultant shall demonstrate their ability to adhere to the project schedule and complete all professional engineering services by the

project deadline. A detailed project schedule must be prepared and included with the proposal content demonstrating the ability to complete the project within the proposed timeframes.

#### **12.4 Project Approach**

**12.4.1** Consultant shall demonstrate their understanding of the project and their approach to performing each project task in accordance with industry standard of care.

#### **12.5 Compensation**

**12.5.1** All professional services will be provided on a lump sum fee basis. Consultant shall submit a detailed Engineering Fee Schedule to be used for this project based on the time lines specified in this RFP.

**12.5.1.1** The Engineering Fee Schedule shall detail the effort necessary to perform each task.

**12.5.1.2** The fee schedule shall include the labor classification, hourly rate, hours to complete each task, total labor costs, expenses and subtotal for each task.

**12.5.1.3** The Engineering Fee Schedule shall also include the total professional engineering services cost.

**12.5.1.4** The fee schedule shall include an hourly rate schedule that will be used for changes in scope.

#### **12.6 References**

**12.6.1** Consultant shall provide references to demonstrate the:

**12.6.1.1** Quality, responsiveness, timeliness and cost of work previously performed for the City or other municipalities.

**12.6.1.2** Completeness and thoroughness of past work performed.

**12.6.1.3** Accuracy of previous estimates for professional engineering services and construction costs relative to final construction costs.

**12.6.1.4** Capabilities of key technical personnel who were assigned to perform and complete the work.

**12.6.1.5** Capabilities of key technical personnel from any sub-consultants who will be assigned to perform any work on this project.

**12.6.1.6** Ability of the consulting firm to meet schedules and deadlines.

**12.6.1.7** Ability of the consulting firm to control costs and meet budgets.

- 12.6.1.8** Ability of the consulting firm, its principals and key technical personnel to communicate and cooperate with clients.

### **13.0 PROPOSAL REQUIREMENTS**

- 13.1** Responding firms shall include in their Proposals all the information that is requested in Section 12, Proposal Content and Evaluation Criteria. Firms are encouraged to provide any additional information they feel will further demonstrate the firm's qualifications and abilities to acceptably complete this project but are hereby instructed to limit such additional information to that which is directly relevant to the services being requested.
- 13.2** The Proposal shall not exceed twenty-five (25) pages. Any superfluous information included not relevant to the services being requested only lengthens the review of a Proposal and could certainly detract from the true merits of the Proposal. Four (4) copies shall be submitted.
- 13.3** Electronic submissions will be accepted. The submission must be compatible with Adobe Acrobat, in a single file, and be formatted to print on standard office paper sizes. No pages shall be larger than 11"x17." Fax submissions will not be accepted.
- 13.4** All material submitted in accordance with this RFP becomes property of the City and will not be returned.

#### **Proposal Selection**

The City of Dublin will use a Selection Committee to review and evaluate the proposals. From this process the City may select the winning proposal. If a clear decision can't be made, or if the Selection Committee needs further clarification, the City reserves the right to shortlist the proposals and contact short listed firms to request an individual meeting or interview. The Selection Committee plans to make the final selection by **June 9, 2015**.



### **Proposal Deadline**

If you have any questions regarding this RFP, please contact Jean-Ellen Willis, PE, (614) 410-4633; [jwillis@dublin.oh.us](mailto:jwillis@dublin.oh.us). Any other contact with City personnel related to this RFP, prior to the formal selection of the Consultant, is expressly prohibited without the consent of the City's Project Manager.

**The Proposal shall be submitted to the following address no later than 4:00 PM on Tuesday, June 2, 2015. Proposals received after this deadline will NOT be considered.**

Consultants should submit their Proposal to:

Jean-Ellen Willis, PE  
City of Dublin, Ohio  
Division of Engineering  
5800 Shier-Rings Road  
Dublin, OH 43016